Effective Infrastructure Management in Software Development Firms in Sri Lanka

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DECLARATION

"I certify that this dissertation does not incorporate without acknowledgement any material previously submitted for a degree or diploma in any University to the best of my knowledge and belief it does not contain any material previously published, written or orally communicated by another person where due reference is made in the text."

.....
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To the best of my knowledge, the above particulars are correct.

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Abstract

Efficient and effective IT infrastructure management is one of the most challenging tasks facing senior managers who often feel ill equipped to make important decisions. Implementing right infrastructure at the right time enables rapid implementation of electronically based business initiatives and cost reduction of current business processes.

Using a survey this research analyzes six components of infrastructure management in software development firms in Sri Lanka. The components explored in this study are technology transfer, technology usage, technology needs assessment, technology change, technology evaluation and resource planning.

By studying 7 software exporting firms out of 44 software exporters the most important factors in infrastructure management, which affect revenue and infrastructure expenditure were identified.

The results suggest that, among all the infrastructure management factors technology usage and technology transfer were the most significant factors, which affect a software development organization's revenue. Implications of the results are discussed.

The dissertation concludes with a new strategy for increasing the efficiency and effectiveness of a software development company. A set of procedures are defined to make each infrastructure management component efficient and effective in the new strategy. Standards and guidelines should be transferred for efficient technology transfer and for efficient technology usage procedures such as technology identification, selection of appropriate technology, server consolidation, monitoring and tuning, budgeting, security implementation are important. Creation of yearly purchase plan, procurement of PCs, laptops and desktops according to plan, utilization of human resources for infrastructure management tasks, efficient inventory management, software and infrastructure back up, competency development are the important tasks in resource planning. Technology needs assessment, technology evaluation and technology change are other procedures included in the strategy.

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